

Date: Thursday, 24/05/2007 2:01:07 PM
User: Linda Lacelle

Process Sheet

119-753

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : D3624-2
Job Number : 32548	
Estimate Number : 10521	
P.O. Number : <i>N/A</i>	Part Number : D36242
This Issue : 24/05/2007 S.O. No. : <i>N/A</i>	Drawing Number : PROTOTYPE
Prsht Rev. : NC	Project Number : <i>N/A</i>
First Issue : 24/05/2007 Type : THERMOFORMING	Drawing Revision : <i>N/A</i>
Previous Run : 00001	Material : <i>N/A</i>
Written By : _____	Due Date : 31/05/2007 Qty: 1 Um: Each
Checked & Approved By : _____	
Comment : _____	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	THERMOFORMING	THERMOFORMING MACHINE



Comment: THERMOFORMING MACHINE
MAKE PER DRWG D3624 REV.A

69 sf.

Ident material to size material: M-Acrylic-S.177 B# M104325

2.0) Thermoform D3624-2 per Polio (preliminary) and as per Dwg D3624 Rev. A.

1-Qty 2x 12" depth

2-Qty 3x 11" depth

with D3624-277

DT6953 07.05.24 (PTC)

Note: windows used for load test

3.0) QC 6s - Inspect dimensions, and Material thickness per Dwg D3624

- Inspect for voids. 07.05.24 (2)

4.0) - Trim window per D3624-272

- Debur edges DT6954 07.05.24

- Engrave Part & Batch number.

5.0) QC 5 07.05.24 (1) 07.05.24 (1)

6.0) QC 21 07.05.24

Job Completion



846

U 07.05.30

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES								
DATE	STEP	PROCEDURE CHANGE				By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
0705-24	2.0	4 parts scrap upon oven & folio set-up.	Q51042	Scrap & destroy No replace.	Q51042 0705-24	Q51042 0705-24	Q51042	0705-24
0705-24	2.0	2x 12" windows scrap for load test. 1x 11" window scrap for load test	Q51042	destroy no replace	Q51042 07-05-24	Q51042 0705-24	Q51042	0705-24
0705-24	4.0	1 window scrap. Flange cracked during trimming.	Q51042	Keep window as a reference for tooling.	Q51042 0705-24	Q51042 0705-24	Q51042	0705-24

NOTE: Date & initial all entries

OVEN SETUP SHEET

PART#

REV:

PART NAME:

A119 Bubble Windows

TOP OVEN

16		14	12			14	16	
0		50	50			50	0	
11	10	8	5	2	5	8	10	11
0	0	50	50	50	50	50	0	0
		7	4	1	4	7		
		50	45	30	45	50		
		9	6	3	6	9		
		50	40	40	40	50		
17		15	13			15	17	
0		50	50			50	0	

BOTTOM OVEN

16		14	12		14	16	
0		50	50		50	0	
11	10	8	5	2	5	8	10
0	0	50	50	50	50	50	0
		7	4	1	4	7	
		50	45	30	45	50	
		9	6	3	6	9	
		50	40	40	40	50	
17		15	13		15	17	
0		50	50		50	0	

C-FLEX PROGRAM SETUP

11

PART NUMBER:

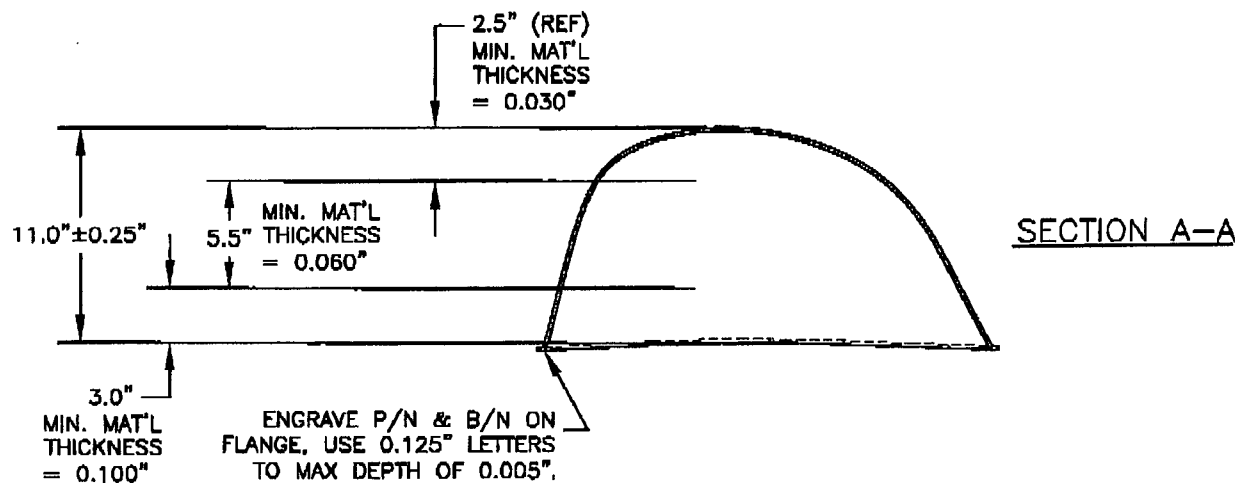
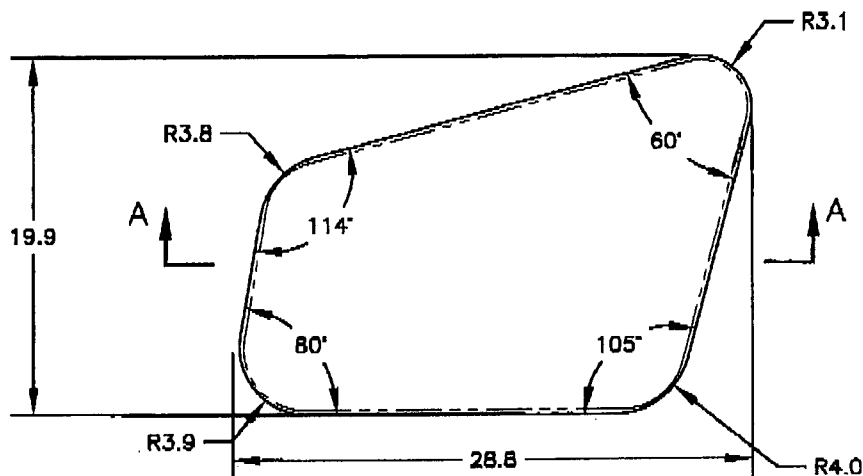
PART NAME: *Al19 BUBBLE*

REV:

FUNCTION / STEP # 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	17	18	19	20	21	22	23	24
Bot. Platen Ext.	X																								
Bot Platen Ret.			X																						
Bot Pat Ext. / Top Del																									
Bottom Vacuum		X																							
Bot Eject / Bot. Air																									
Top Platen Extend																									
Top Platen Retract																									
Top Platen Ext. / Bot Del																									
Top Vacuum																									
Top Eject / Top Air																									
Forming Timer		X																							
Platen Delay Timer																									
Platen Return Timer																									
Hold Timer # 1																									
Hold Timer # 2																									
Eject Timer																									
Mid-Step Timer																									
Skip Timer																									
Start Fans		X	X																						
Both Platens Return																									
Top Aux. Vacuum																									
Bottom Aux. Vacuum																									
Reset				X																					
FUNCTION / STEP # 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	17	18	19	20	21	22	23	24

DART

DESIGN <i>qp</i>	DRAWN BY <i>qp</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>fl</i>	APPROVED <i>fl</i>	DRAWING NO. D3624	REV. B SHEET 1 OF 1
DATE 07.05.24		TITLE BUBBLE WINDOW (A119)	SCALE 1:10
A	07.05.14	NEW ISSUE	
B	07.05.24	11.0" DEPTH WAS 12.0"	

**D3624-2 BUBBLE WINDOW**

- 1) MATERIAL: POLYCAST II CLEAR ACRYLIC OR PLEXIGLAS "G" CAST ACRYLIC, 0.177" THICK (REF DART SPEC. M-ACRYLIC-S.177)
- 2) FORM PER DT8953
FORMING PROCESS:
 - (a) DRAPE MAT'L OVER DT8953 MOLD
 - (b) HEAT TO 286°F
 - (c) VACUUM TO SPECIFIED HEIGHT
 - (d) LEAVE FOR AT 4 MINUTES TO COOL
 - (e) TRIM WINDOW PER DT8954
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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D-3624-2

Sheet Batch M104325

~~B-32548~~
B-32548

THERMOFORMING SETUP SHEET

PROGRAMED BY:		/ /
VERIFY BY:		/ /
QC APPROVED:		/ /

FOLIO #:		
FOL REVISION:		
PREPARED BY:		/ /
APPROVED BY:		/ /

PART NUMBER:	D-3624-2.
TECHNIQUE NUMBER:	
MATERIAL TYPE:	ACRYLIC "CELLCAST"

PART NAME:	A119 Bubble	REV:	
SHEET SIZE:	30"x48"x.177" Clear "Plexiglass G" 10100655		

TIMERS	SET. SECS
HEATING TIMER	300
FORMING TIMER	165
PLATEN DELAY TIMER	-
PLATEN RETURN TIMER	-
EJECT DELAY TIMER	-
FAN DELAY	35
HOLD TIMER #1	-
HOLD TIMER #2	-
VACUUM DELAY	-

CLAMP FRAME POSITION	FRONT	BACK	LEFT	RIGHT

OPTIONAL FEATURES	DEGREE F.		
OVEN PREHEAT TIMER	280°F		
INFRARED SETTING	280°F		

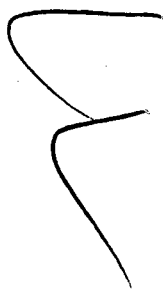
PLATEN LIMIT SWITCH SETTINGS	
TOP PLATEN	INCHES
LS-18 TOP RET. TO SAFETY	
TOP RETRACTED POSITION	NA
TOP MID-TRAVEL POSITION	NA
TOP DUAL SPEED POSITION	NA
TOP EXTENDED POSITION	NA
LS-18 TOP EXT. TO SAFETY	
BOTTOM PLATEN	INCHES
LS-17 BOT. EXT. TO SAFETY	27.0
BOT. EXTENDED POSITION	19.5
BOT. DUAL SPEED POSITION	15.5
BOT. MID-TRAVEL POSITION	10.0
BOT. RETRACTED POSITION	8.0
LS-17 BOT. RET. TO SAFETY	1.0

VALVE AND TEMPERATURE SETTINGS:		
BOTTOM VACUUM BALL VALVE 1/2"	DEGREE OPEN	PSI SETTING
TOP VACUUM BALL VALVE		
BOTTOM AIR EJECT BALL VALVE		
TOP AIR EJECT BALL VALVE		

NOTES:

Chlis has 10 inset

How much you cut



36" x 48"

= 3 windows per 96" x 48" sheet

07.05.36

Date: Wednesday, 23/04/2008 1:14:30 PM

User: Linda Lacelle

JOB HISTORY : DETAIL

Job Number	: 32548	Customer	: Dart Helicopters Services
Estimate Number	: 10521	DWG Name	: D3624-2
Purchase Order #	:	Part Number	: D36242
Complete Date	: 30/05/2007 10:50:02	DWG Number	: PROTOTYPE
Rev.	:		

DUE DATE	ORDERED	DELIVERED
31/05/2007	1	1

2.0 10100655-PLEXIGLAS G CAST ACRYLIC SHEET 4 x 8 x . I

DATE	EMPLOYEE	TYPE	Qty	COST	
30/05/2007	LACE01: Lacelle, Linda	10100655	63.000	\$246.09	Lot # 104325 Qty. 63

Subtotal: QTD: 63 CTD: 0 \$246.09

	TIME	COST
Machine Time:	0.00	\$0.00
Labor:	0.00	\$0.00
Sub-contract (external Op.):		\$0.00
INVENTORY ITEM:		\$246.09
SUB-COMPONENT (SUB-JOB):		\$0.00
Total:		\$246.09

COST PER UNIT: \$246.09